

CENTRAL INTELLIGENCE AGENCY

## INFORMATION REPORT

U

X1A

COUNTRY USSR

DATE DISTR. 16 Jul 51

25X1A

SUBJECT Analysis of Two Soviet Rubber Catheters

NO. OF PAGES 1

PLACE  
ACQUIRED

25X1A

DATE  
ACQUIREDNO. OF ENCLS.  
(LISTED BELOW)SUPPLEMENT TO  
REPORT NO.

25X1X

DATE OF

1. Infra red examination of both samples indicates that the base elastomer is natural rubber. However, X-ray diffraction pictures from stretched samples failed to reveal the usual rubber spot pattern. The only manner in which these opposing facts can be reconciled is to conclude that the rubber used must be reclaim.
2. It has been found from past experience that reclaimed rubber stocks usually will not crystallize on stretching, whereas the infra red pattern of reclaim is identical to that of natural rubber.
3. There is no evidence of loading pigments in the X-ray pattern, which means that both the original compound from which the reclaim was made as well as the present compound must be classed as pure gum stock. The absence of residual zinc oxide implies that these compounds may be simple rubber-sulfur stocks.
4. These samples have rather poor physical properties but this type of service is not one which requires the ultimate in this respect. Therefore, they probably ~~likely~~ would perform their designed function quite adequately.
5. Certain physical properties were measured in an effort to determine the serviceability of the catheters in tropic and arctic climates. The tests made to check behavior in these climates were the Gehman Low Temperature Torsion Test and oxygen bomb aging. The Gehman test showed a freeze point of  $-42^{\circ}\text{C}$  and a  $T_5$  point of  $-24^{\circ}\text{C}$ .
6. The tensile strength of the material before aging was 512 lbs/in<sup>2</sup> and an elongation of 350%. After aging for 96 hours in an oxygen bomb at  $70^{\circ}\text{C}$ , the tensile strength dropped to 140 lbs/in<sup>2</sup> and the elongation could not be measured but was less than 50%.
7. These results show the material to be much inferior to natural rubber tread compounds for these conditions. The results are, however, in line with those to be expected from reclaimed rubber.

-End-

CLASSIFICATION Secret

STATE	<input checked="" type="checkbox"/>	NAVY	<input checked="" type="checkbox"/>	NSRB	<input checked="" type="checkbox"/>	DISTRIBUTION													
ARMY	<input checked="" type="checkbox"/>	AIR	<input checked="" type="checkbox"/>	FBI	<input checked="" type="checkbox"/>														